



STIC Search Report

EIC 2100

STIC Database Tracking Number: 121747

TO: Mohammad Ali
Location: 4Y18
Art Unit : 2177
Tuesday, May 11, 2004

Case Serial Number: 09/424661

From: Carol Wong
Location: EIC 2100
PK2-4B33
Phone: 305-9729

carol.wong@uspto.gov

Search Notes

Dear Examiner Ali,

Attached are the nonpatent literature search results (from commercial databases) for your case. Due to the 3-hour F&F time limitation, foreign patent files have not been searched.

Color tags mark the patents/articles which appear to be most relevant to the case. Color of tag has no significance. Pls review all documents, since untagged items might also be of interest. If you wish to order the complete text of any document, pls submit request(s) directly to the EIC2100 Reference Staff located in PK2-4B40.

Pls call if you have any questions or suggestions for additional terminology, or a different approach to searching the case. Finally, pls complete the attached Search Results Feedback Form, as the EIC/STIC is continually soliciting examiners' opinion of the search service.

Thanks,
Carol





STIC EIC 2100 Search Request Form

121747

Today's Date: 5/11/04

What date would you like to use to limit the search?

Priority Date: 7/98

Other:

Name Mohammed Ali

AU 2177 Examiner # 78414

Room # 4718 Phone 605-4356

Serial # 09/424,661

Format for Search Results (Circle One):

PAPER DISK EMAIL

Where have you searched so far?

☒ USP ☒ DWPI ☒ EPO ☒ JPO ☒ ACM ☒ IBM TDB
☒ IEEE ☐ INSPEC ☐ SPI Other _____

Is this a "Fast & Focused" Search Request? (Circle One) ☒ YES ☐ NO

A "Fast & Focused" Search is completed in 2-3 hours (maximum). The search must be on a very specific topic and meet certain criteria. The criteria are posted in EIC2100 and on the EIC2100 NPL Web Page at <http://ptoweb/patents/stic/stic-tc2100.htm>.

What is the topic, novelty, motivation, utility, or other specific details defining the desired focus of this search? Please include the concepts, synonyms, keywords, acronyms, definitions, strategies, and anything else that helps to describe the topic. Please attach a copy of the abstract, background, brief summary, pertinent claims and any citations of relevant art you have found.

Find a destination object with voice input
in natural language from a database

"Destination object" "Natural language"
"Sentences categories", "filtering attributes"
"grammatical structure", "Analysis"
Search

Priority: 7/98

STIC Searcher Carol Ann

Phone 505-9729

Date picked up 5-11-04 Date Completed 5-11-04



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Set	Items	Description
S1	881474	VOICE OR SPEECH OR SPEAK??? ? OR SPOKE? ?
S2	71619	S1(2N) (RECOGNIT? OR RECOGNIS? OR RECOGNIZ?)
S3	9268	S1(2N) (UNDERSTAND? OR UNDERSTOOD? OR COMPREHEND? OR COMPREHENS?)
S4	19535	S1(2N) (COMMAND? ? OR CONTROLL? OR CONTROL??? ? OR ACTIVAT? OR ACTUAT? OR PROMPT? OR OPERAT???? ? OR ENABL? OR INABL?)
S5	2305168	SEARCH? OR QUERY? OR QUERIE? ? OR RETRIEV? OR SUBQUER? OR - ENQUIR? OR INQUIR? OR INTERROGAT? OR REQUEST? OR FETCH? OR IR
S6	271708	S5(3N) (DATA OR INFORMATION)
S7	74917	S5(3N) (DATABASE? OR DB OR KNOWLEDGEBASE? OR KNOWLEDGE()BASE? ? OR DATASET? OR DATABANK? OR DATAFILE? OR DATASYSTEM? OR - DATALIBRAR?)
S8	52711	S5(3N) (FILE OR FILES OR CONTENT? ? OR RECORD? ? OR REPORT? ? OR MESSAGE? ?)
S9	51072	S5(3N) (MEMORY? OR ARCHIV? OR STORAGE OR DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR REPOSITORIES OR WAREHOUSE? OR WAR-

E()HOUSE? ?)

S10	52225	NATURAL(W)LANGUAGE OR NLP
S11	2743	S2:S4 AND S6:S9
S12	525	S11 AND S10
S13	195	S12/1999:2004
S14	330	S12 NOT S13
S15	1361	S2:S4(S)S6:S9
S16	208	S15(S)S10
S17	66	S16/1999:2004
S18	79	S16/1998:2004
S19	129	S16 NOT S18
S20	86	RD (unique items)
S21	80	S20 AND S2

21/7/1 (Item 1 from file: 2)
 DIALOG(R)File 2:INSPEC
 (c) 2004 Institution of Electrical Engineers. All rts. reserv.

5716101 INSPEC Abstract Number: B9711-6130-043, C9711-7250-025
Title: Indexing and search of multimodal information
 Author(s): Hauptmann, A.G.; Wactlar, H.D.
 Author Affiliation: Sch. of Comput. Sci., Carnegie Mellon Univ., Pittsburgh, PA, USA
 Conference Title: 1997 IEEE International Conference on Acoustics, Speech, and Signal Processing (Cat. No.97CB36052) Part vol.1 p.195-8 vol.1
 Publisher: IEEE Comput. Soc. Press, Los Alamitos, CA, USA
 Publication Date: 1997 Country of Publication: USA 5 vol.
 (xxii+xxv+xxiv+xxii+4156) pp.
 ISBN: 0 8186 7919 0 Material Identity Number: XX97-01336
 U.S. Copyright Clearance Center Code: 0 8186 7919 0/97/\$10.00
 Conference Title: 1997 IEEE International Conference on Acoustics, Speech, and Signal Processing
 Conference Sponsor: IEEE Signal Process. Soc.; DPG; GI; ITG; TUM
 Conference Date: 21-24 April 1997 Conference Location: Munich, Germany
 Language: English Document Type: Conference Paper (PA)
 Treatment: Practical (P)
 Abstract: The Informedia Digital Library Project allows full content indexing and retrieval of text, audio and video material. The integration of speech recognition, image processing, natural language processing and information retrieval overcomes limits in each technology to create a useful system. In order to answer the question how good speech recognition has to be in order to be useful and usable for indexing and retrieving speech recognizer generated transcripts, some empirical evidence is presented that illustrates the degradation of information retrieval at different levels of speech accuracy. In our experiments, word error rates up to 25% did not significantly impact information retrieval and error rates of 50% still provided 85 to 95% of the recall and precision relative to fully accurate transcripts in the same retrieval system. (8 Refs)
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21/7/2 (Item 2 from file: 2)
 DIALOG(R)File 2:INSPEC
 (c) 2004 Institution of Electrical Engineers. All rts. reserv.

5651565 INSPEC Abstract Number: C9709-6180N-010
Title: Overview [spoken dialogue system design]

Author(s): Maier, E.; Mast, M.; LuperFoy, S.
Author Affiliation: DFKI GmbH, Saarbrücken, Germany
Conference Title: Dialogue Processing in Spoken Language Systems. ECAI'96
Workshop. Revised Papers p.1-13
Editor(s): Maier, E.; Mast, M.; LuperFoy, S.
Publisher: Springer-Verlag, Berlin, Germany
Publication Date: 1997 Country of Publication: Germany vii+220 pp.
ISBN: 3 540 63175 5 Material Identity Number: XX97-01507
Conference Title: Dialogue Processing in Spoken Language Systems. ECAI
'96 Workshop
Conference Date: 13 Aug. 1996 Conference Location: Budapest, Hungary
Language: English Document Type: Conference Paper (PA)
Treatment: General, Review (G)
Abstract: In recent years considerable progress has been made in the
areas of **speech recognition**, **natural language**
interpretation/generation, and dialogue processing for conversational
interfaces to **information retrieval** systems. The paper gives an
overview of the design, implementation, and evaluation of spoken language
dialogue (SLD) systems. (42 Refs)
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21/7/6 (Item 6 from file: 2)
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5080059 INSPEC Abstract Number: C9511-6180N-018
**Title: Speech recognition and full-text retrieval: interface and
integration**
Author(s): Feder, J.D.; Hobbs, E.T.
Conference Title: 16th National Online Meeting Proceedings - 1995 p.
97-104
Editor(s): Williams, M.E.
Publisher: Learned Inf, Medford, NJ, USA
Publication Date: 1995 Country of Publication: USA xii+431 pp.
Conference Title: Proceedings 16th National Online Meeting
Conference Sponsor: Learned Inf.
Conference Date: 2-4 May 1995 Conference Location: New York, NY, USA
Language: English Document Type: Conference Paper (PA)
Treatment: Practical (P)
Abstract: In a two-phase effort sponsored by both government and
commercial organizations, **speech recognition** and a **natural language**
-based full-text search system are being combined to enable robust,
"hands-free" interaction for a range of **information retrieval**
applications. One aspect of this combination is at the interface level, to
enable spoken commands for software menu navigation, and full-text
retrieval. At a more fundamental level of integration, this project is
applying **natural language** processing techniques to greatly improve the
state-of-the-art of **speech recognition**. (0 Refs)
Subfile: C
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21/7/7 (Item 7 from file: 2)
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5027963 INSPEC Abstract Number: C9510-6180N-022
Title: Continuous speech understanding based on automatic learning of

acoustic and semantic models

Author(s): Prieto, N.; Sanchis, E.; Palmero, L.

Author Affiliation: Dept. de Sistemas Inf. y Comput., Univ. Politecnica de Valencia, Spain

Conference Title: ICSLP 94. 1994 International Conference on Spoken Language Processing Part vol.4 p.2175-8 vol.4

Publisher: Acoustical Soc. Japan, Tokyo, Japan

Publication Date: 1994 Country of Publication: Japan 4 vol. 2258 pp.

Conference Title: Proceedings of 1994 International Conference on Spoken Language Processing

Conference Date: 18-22 Sept. 1994 Conference Location: Yokohama, Japan

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: In this paper, we present a continuous **speech understanding** (CSU) system directed by semantics, in which all the required knowledge sources are automatically learnt from training data. In particular, we use an inductive learning technique in order to obtain structural models both at the acoustic-phonetic level and the semantic level. The system which we propose assumes that understanding is the ultimate goal of the system performance. Therefore, the search should mainly be constrained by the semantic relations rather than by the word relations of language, allowing for a relaxed syntax. Preliminary experiments have been carried out with a semantic constrained task consisting of the understanding of **queries** to a **database** with information about Spanish geography in **natural language**, using two different system architectures. (7 Refs)

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21/7/8 (Item 8 from file: 2)

DIALOG(R)File 2:INSPEC

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5027768 INSPEC Abstract Number: C9510-6180N-005

Title: A spoken language system for information retrieval

Author(s): Bennacef, S.K.; Bonneau-Maynard, H.; Gouvain, J.L.; Lamel, L.; Minker, W.

Author Affiliation: Lab. d'Informatique pour la Mecanique et les Sci. de l'Ingenieur, CNRS, Orsay, France

Conference Title: ICSLP 94. 1994 International Conference on Spoken Language Processing Part vol.3 p.1271-4 vol.3

Publisher: Acoustical Soc. Japan, Tokyo, Japan

Publication Date: 1994 Country of Publication: Japan 4 vol. 2258 pp.

Conference Title: Proceedings of 1994 International Conference on Spoken Language Processing

Conference Date: 18-22 Sept. 1994 Conference Location: Yokohama, Japan

Language: English Document Type: Conference Paper (PA)

Treatment: Applications (A); Practical (P)

Abstract: Spoken language systems aim to provide a natural interface between humans and computers by using simple and natural dialogues to enable the user to access stored information. The LIMSI spoken language work is being pursued in several task domains. We present a system for vocal access to a database for a French version of the Air Travel Information Services (ATIS) task. The ATIS task is a designated common task for data collection and evaluation within the ARPA Speech and **Natural Language** program. A complete spoken language system including a **speech recognizer**, a **natural language** component, a **database query generator** and a **natural language** response generator is described. The speaker independent continuous **speech recognizer** makes use of task-independent acoustic models trained on the BREF corpus and a

task-specific language model. A case-frame approach is used for the **natural language** component. This component determines the meaning of the query and builds an appropriate semantic frame representation. The semantic frame is used to generate a **database request** to the **database** management system and the returned information is used to generate a response. First evaluation results for the ATIS task are given for the recognition and understanding components, as well as for the combined system. (11 Refs)

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21/7/9 (Item 9 from file: 2)

DIALOG(R)File 2:INSPEC

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4862355 INSPEC Abstract Number: C9503-6180N-001

Title: Multimodally natural language interface SIMPLA

Author(s): Arita, S.; Nishimura, K.; Shimazu, H.

Journal: NEC Research and Development vol.35, no.4 p.421-5

Publication Date: Oct. 1994 Country of Publication: Japan

CODEN: NECRAU ISSN: 0547-051X

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: The authors have developed a novel method to interpret **queries** for relational **database**. The method is semantically driven and robust enough for non-grammaticality or ellipsis. Based on the method, they have developed a multimodal **natural language** interface SIMPLA, which is a combination of the interpreting method, **voice recognition** /synthesis and image processing techniques. The user of SIMPLA can talk with a database system, and can read, hear or view his wanted data. (8 Refs)

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21/7/10 (Item 10 from file: 2)

DIALOG(R)File 2:INSPEC

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4857067 INSPEC Abstract Number: B9502-6130-039, C9502-6180N-014

Title: The challenge of spoken language systems: research directions for the nineties

Author(s): Cole, R.; Hirschman, L.; Atlas, L.; Beckman, M.; Biermann, A.; Bush, M.; Clements, M.; Cohen, L.; Garcia, O.; Hanson, B.; Hermansky, H.; Levinson, S.; McKeown, K.; Morgan, N.; Novick, D.G.; Ostendorf, M.; Oviatt, S.; Price, P.; Silverman, H.; Spiitz, J.; Waibel, A.; Weinstein, C.; Zahorian, S.; Zue, V.

Author Affiliation: Oregon Graduate Inst. of Sci. & Technol., Beaverton, OR, USA

Journal: IEEE Transactions on Speech and Audio Processing vol.3, no.1 p.1-21

Publication Date: Jan. 1995 Country of Publication: USA

CODEN: IESPEJ ISSN: 1063-6676

U.S. Copyright Clearance Center Code: 1063-6676/95/\$04.00

Language: English Document Type: Journal Paper (JP)

Treatment: Applications (A); Bibliography (B); Practical (P)

Abstract: A spoken language system combines **speech recognition**, **natural language** processing and human interface technology. It functions by recognizing the person's words, interpreting the sequence of words to obtain a meaning in terms of the application, and providing an

appropriate response back to the user. Potential applications of spoken language systems range from simple tasks, such as **retrieving information** from an existing database (traffic reports, airline schedules), to interactive problem solving tasks involving complex planning and reasoning (travel planning, traffic routing), to support for multilingual interactions. We examine eight key areas in which basic research is needed to produce spoken language systems: (1) robust **speech recognition**; (2) automatic training and adaptation; (3) spontaneous speech; (4) dialogue models; (5) **natural language** response generation; (6) speech synthesis and speech generation; (7) multilingual systems; and (8) interactive multimodal systems. In each area, we identify key research challenges, the infrastructure needed to support research, and the expected benefits. We conclude by reviewing the need for multidisciplinary research, for development of shared corpora and related resources, for computational support and for rapid communication among researchers. The successful development of this technology will increase accessibility of computers to a wide range of users, will facilitate multinational communication and trade, and will create new research specialties and jobs in this rapidly expanding area. (146 Refs)

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21/7/11 (Item 11 from file: 2)

DIALOG(R)File 2:INSPEC

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4844970 INSPEC Abstract Number: C9502-7250N-003

Title: Breaking the keyboard barrier: voice input to information retrieval systems

Author(s): Hawkins, D.T.

Author Affiliation: AT&T, Bridgewater, NJ, USA

Journal: Online vol.18, no.6 p.66-8, 70-1

Publication Date: Nov.-Dec. 1994 Country of Publication: USA

CODEN: ONLIDN ISSN: 0146-5422

U.S. Copyright Clearance Center Code: 0146-5422/94/\$2.00+00.15

Language: English Document Type: Journal Paper (JP)

Treatment: General, Review (G); Practical (P); Product Review (R)

Abstract: Speaking to one's computer is usually a sign of intense frustration, often done in a spirit of anger. The day is rapidly approaching, however, when speaking to a computer will be an accepted means of communicating with it, instead of typing on the keyboard, as is generally done today. Research on voice input systems and **speaker recognition** has been conducted for many years at respected corporate research organizations such as AT&T Bell Laboratories, as well as many academic institutions. Much of this research has been exploratory and theoretical, but recently, voice technology has begun to emerge from the laboratory environment and has been applied to practical applications such as **information retrieval**. West Publishing has pioneered the use of voice input to an online retrieval system with its LawTALK system. LawTALK interacts with West's WESTLAW service (including its WIN **natural language** interface). Using LawTALK, the user can conduct an entire search without touching the keyboard. (2 Refs)

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21/7/12 (Item 12 from file: 2)

DIALOG(R)File 2:INSPEC

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4831305 INSPEC Abstract Number: C9501-6180N-022

Title: Multi-modally natural language interface SIMPLA

Author(s): Arita, S.; Nishimura, K.; Shimazu, H.

Journal: NEC Technical Journal vol.47, no.8 p.72-5

Publication Date: Sept. 1994 Country of Publication: Japan

CODEN: NECGEZ ISSN: 0285-4139

Language: Japanese Document Type: Journal Paper (JP)

Treatment: Applications (A); Practical (P)

Abstract: NEC has developed a novel method to interpret **queries** for relational **database**. The method is semantically driven and robust enough for non-grammaticality or omissions. Based on the method, NEC has developed a multi-modally **natural language** interface SIMPLA. It is a combination of the interpreting method, **voice recognition** /synthesis and image processing technologies. The user of the SIMPLA can talk with the database system, and can also read, hear or view the data that he wants. (9 Refs)

Subfile: C

21/7/13 (Item 13 from file: 2)

DIALOG(R)File 2:INSPEC

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4684948 INSPEC Abstract Number: B9407-6130-044, C9407-6180N-030

Title: Toward systems that understand spoken language

Author(s): Zue, V.W.

Author Affiliation: Lab. for Comput. Sci., MIT, Cambridge, MA, USA

Journal: IEEE Expert vol.9, no.1 p.51-9

Publication Date: Feb. 1994 Country of Publication: USA

CODEN: IEEEXE7 ISSN: 0885-9000

U.S. Copyright Clearance Center Code: 0885-9000/94/\$4.00

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: MIT's Voyager system is an attempt to explore issues related to a fully interactive spoken-language system and **natural language** understanding. The system helps users get from one location to another within a specific geographical area, and can provide information about certain objects in the area. The current version of Voyager focuses on the city of Cambridge, Massachusetts, between MIT and Harvard University. Voyager's domain knowledge (or backend) is an enhanced version of an existing direction assistance program (J.R. Davis and T.F. Trobaugh, 1987). The map database includes the locations of various classes of objects (streets, buildings, rivers) and their properties (address, phone number, etc.). To **retrieve information**, the Summit **speech recognition** system converts the user's speech signal into a set of word hypotheses, the Tina **natural language** system interacts with Summit to obtain a word string and a linguistic interpretation of the utterance, and an interface between the two subsystems converts Tina's semantic representation into the appropriate function calls to the back-end. Voyager then responds with a map, highlighting the objects of interest, plus an textual and spoken answer. The current implementation has a vocabulary of about 350 words and can deal with various types of queries, such as the location of objects, simple properties of objects, how to get from one place to another, and the distance and travel time between objects. (10 Refs)

Subfile: B C

21/7/15 (Item 15 from file: 2)

DIALOG(R)File 2:INSPEC

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04279973 INSPEC Abstract Number: B9212-6130-042, C9212-6180N-032

Title: **Speech-understanding systems: toward an optimized man-machine interface**

Author(s): Zunkler, K.

Journal: Siemens Review vol.59, no.3-4 p.30-5

Publication Date: July-Aug. 1992 **Country of Publication:** West Germany

CODEN: SZTEA6 **ISSN:** 0302-2528

Language: English **Document Type:** Journal Paper (JP)

Treatment: General, Review (G); Practical (P)

Abstract: **Speech - understanding** systems will transform our relationships with machines. From the simplest single word recognition function to on-line real-time translation systems, the range of applications is virtually endless. The author provides an outline of the development of a technology designed to lead to man-machine communication using **natural language**. Different applications and projects in the framework of speech processing are presented, and the outlook for future **speech understanding** systems is examined. Among the topics discussed are the SPICOS II dialogue system for **information retrieval**, its linguistic analysis system and its answer generation and synthesis system.

(0 Refs)

Subfile: B C

21/7/16 (Item 16 from file: 2)

DIALOG(R)File 2:INSPEC

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04141867 INSPEC Abstract Number: B9206-6130-027, C9206-5585-013

Title: **Data driven search organization for continuous speech recognition**

Author(s): Ney, H.; Mergel, D.; Noll, A.; Paeseler, A.

Author Affiliation: Philips GmbH Forschungslab., Aachen, Germany

Journal: IEEE Transactions on Signal Processing vol.40, no.2 p. 272-81

Publication Date: Feb. 1992 **Country of Publication:** USA

CODEN: ITPRED **ISSN:** 1053-587X

U.S. Copyright Clearance Center Code: 1053-587X/92/\$03.00

Language: English **Document Type:** Journal Paper (JP)

Treatment: Practical (P); Theoretical (T)

Abstract: The authors describe an architecture and search organization for continuous **speech recognition**. The **recognition** module is part of the Siemens-Philips-Ipo project on continuous **speech recognition** and **understanding** (SPICOS) system for the understanding of **database queries** spoken in **natural language**. The goal of this project is a man-machine dialogue system that is able to **understand** fluently **spoken** German sentences and thus to provide voice access to a database. The recognition strategy is based on Bayes decision rule and attempts to find the best interpretation of the input speech data in terms of knowledge sources such as a language model, pronunciation lexicon, and inventory of subword units. The implementation of the search has been tested on a continuous speech database comprising up to 4000 words for each of several speakers. The efficiency and robustness of the search organization have been checked and evaluated along many dimensions, such as different speakers, phoneme models, and language models. (13 Refs)

Subfile: B C

21/7/17 (Item 17 from file: 2)

DIALOG(R)File 2:INSPEC

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03463365 INSPEC Abstract Number: B89063336, C89057049

Title: Continuous- speech recognition using a stochastic language model

Author(s): Paeseler, A.; Ney, H.

Author Affiliation: Philips GmbH Forschungslab. Hamburg, West Germany

Conference Title: ICASSP-89: 1989 International Conference on Acoustics, Speech and Signal Processing (IEEE Cat. No.89CH2673-2) p.719-22 vol.2

Publisher: IEEE, New York, NY, USA

Publication Date: 1989 Country of Publication: USA 4 vol. 2833 pp.

U.S. Copyright Clearance Center Code: CH2673-2/89/0000-0719\$01.00

Conference Sponsor: IEEE

Conference Date: 23-26 May 1989 Conference Location: Glasgow, UK

Language: English Document Type: Conference Paper (PA)

Treatment: Theoretical (T); Experimental (X)

Abstract: The authors describe the design of a stochastic language model and its integration into a continuous- **speech recognition** system that is part of the SPICOS system for **understanding database queries** spoken in **natural language**. The recognition strategy is based on statistical decision theory. The stochastic language model for the recognition of **database queries** is based on probabilities of trigrams, bigrams, and unigrams of word categories, which are intended to reflect lexical and semantic aspects of the SPICOS task. The implementation of stochastic language models in the search procedure is described, and results of recognition experiments are given. By using a stochastic model (perplexity = 124) a reduction of the word error rate from 21.8% without language model (perplexity = 917) to 9.1% was achieved. (12 Refs)

Subfile: B C

21/7/19 (Item 19 from file: 2)

DIALOG(R)File 2:INSPEC

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03048106 INSPEC Abstract Number: C88008670

Title: Automatic speech understanding for naval battle management

Author(s): Haake, J.; Benson, P.; Koble, H.

Author Affiliation: ITT Defense Commun. Div., San Diego, CA, USA

Conference Title: Proceedings of the Third Annual Artificial Intelligence and Advanced Computer Technology Conference p.191-5

Publisher: Tower Conference Manage, Wheaton, IL, USA

Publication Date: 1987 Country of Publication: USA 702 pp.

Conference Date: 22-24 April 1987 Conference Location: Long Beach, CA, USA

Language: English Document Type: Conference Paper (PA)

Treatment: Practical (P)

Abstract: In using **natural language** as the input mode for a user interface to a battle management system, speech input has many problems. These problems include the difficulties in integrating the linguistic and cognitive concerns of **natural language** processing with the signal processing concerns of **speech recognition**, and the difficulties of handling errors in **speech recognition** with higher-level knowledge. Some of these problems can be solved by choosing the right hardware and some by constraining the task domain. This paper presents ITT's approach to an application of **speech understanding** in the battle management domain. The authors treat battle management as though it were a database management task. In particular, **natural language** is used to **request information** from a naval taskforce database. The **speech recognizer** works as an alternative to keyboard input. The **natural language** processor does not influence the **speech recognition**. (1 Refs)

Subfile: C

21/7/26 (Item 4 from file: 6)

DIALOG(R)File 6:NTIS

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1798905 NTIS Accession Number: AD-A276 914/9

Eucalyptus: Integrating Natural Language Input with a Graphical User Interface

Wauchope, K.

Naval Research Lab., Washington, DC.

Corp. Source Codes: 000927000; 251950

Report No.: NRL/FR/5510--94-9711

25 Feb 94 33p

Languages: English

Journal Announcement: GRAI9413

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NTIS Prices: PC A03/MF A01

Country of Publication: United States

This report describes Eucalyptus, a **natural language** (NL) interface that has been integrated with the graphical user interface of the KOALAS Test Planning Tool, a simulated Naval air combat command system. The multimodal, multimedia interface handles both imperative commands and **database queries** (either typed or spoken into a microphone) while still allowing full use of the original graphical interface. In this way the precision and consistency of direct manipulation is balanced and augmented by the descriptive power and reduced redundancy of NL. The two input media used together yield such powerful interaction techniques as deixis (simultaneous speech and pointing) and the ability to use mouse clicks and verbal referring expressions interchangeably. Finally, the system's discourse handling capability allows abbreviated NL follow-ups (anaphora and ellipsis) to receive full interpretations based on the prior interaction context, whether verbal or graphical. **Natural language processing, Human-computer interface, Speech recognition.**

21/7/53 (Item 1 from file: 8)

DIALOG(R)File 8:Ei Compendex(R)

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04785599 E.I. No: EIP97083776844

Title: Dialog in the RAILTEL telephone-based system

Author: Bennacef, S.; Devillers, L.; Rosset, S.; Lamel, L.

Corporate Source: LIMSI-CNRS, Orsay, Fr

Conference Title: Proceedings of the 1996 International Conference on Spoken Language Processing, ICSLP. Part 1 (of 4)

Conference Location: Philadelphia, PA, USA Conference Date: 19961003-19961006

Sponsor: Univ of Delaware

E.I. Conference No.: 46796

Source: International Conference on Spoken Language Processing, ICSLP, Proceedings v 1 1996. IEEE, Piscataway, NJ, USA, 96TH8206. p 550-553

Publication Year: 1996

CODEN: 002642

Language: English

Document Type: CA; (Conference Article) Treatment: G; (General Review);

T; (Theoretical)

Journal Announcement: 9710W1

Abstract: Dialog management is of particular importance in telephone-based services. In this paper we describe our recent activities in dialog management and **natural language** generation in the LIMSI RAILTEL system for access to rail travel information. The aim of LEMLAP project RAILTEL was to assess the capabilities of spoken language technology for interactive telephone information services. Because all interaction is over the telephone, oral dialog management and response generation are very important aspects of the overall system design and usability. Each dialog is analyzed to determine the source of any errors (**speech recognition , understanding , information retrieval , processing, or dialog management**). An analysis is provided for 100 dialogs taken from the RAILTEL field trials with naive subjects accessing timetable information. (Author abstract) 6 Refs.

21/7/58 (Item 3 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

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02051077 Genuine Article#: JW854 Number of References: 43

Title: **THE CURRENT STATE OF HUMAN-COMPUTER INTERFACE TECHNOLOGIES FOR USE IN DAIRY-HERD MANAGEMENT**

Author(s): JONES LR

Corporate Source: CORNELL UNIV, DEPT ANIM SCI/ITHACA//NY/14853

Journal: JOURNAL OF DAIRY SCIENCE, 1992, V75, N11 (NOV), P3246-3256

ISSN: 0022-0302

Language: ENGLISH Document Type: ARTICLE

Abstract: The current state of three human-computer interface areas was reviewed, and potential dairy herd management applications were proposed. Alternative input devices (e.g., touch-sensitive screens and **speech recognition**) can provide more intuitive communication with computers. Several user interface designs have been developed that narrow the dichotomy between ease of use and ease of learning. Information technologies can provide dairy herd managers with more complete and immediate access to management information for decision making: 1) **natural language** interfaces, which allow users to **query** a structured database to **retrieve information** ; 2) full text **retrieval** systems, which retrieve pertinent passages from a collection of documents; and 3) hypertext, which is a means of linking related passages of text so that they can be browsed in a logical, nonlinear fashion. The third area of human-computer interface concerns methods of integrating decision support systems into a management workstation that could contain independent systems, systems integrated through a user interface manager, or systems integrated through an intelligent dialogue manager. Advances in human-computer interfaces, if incorporated into dairy management software, should significantly increase the use of computers for dairy management and improve the decisions made by dairy herd managers.

21/7/59 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-EPlus

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02082839 JICST ACCESSION NUMBER: 94A0475564 FILE SEGMENT: JICST-E

Research team report on Japanese language information processing systems.1993 fiscal year. Application and future direction of natural language processing technology. (Sponsor : Agency of Ind. Sci. and

Tech., General Coordination Dep.).

Kogiin Somubu

Nippongo Joho Shori Shisutemu Kenkyuhan Kenkyu Hokokusho. Heisei 5 Nendo.

Shizen Gengo Shori Gijutsu no Oyo to Shorai Doko, 1994, PAGE.61P

JOURNAL NUMBER: N19941238E

UNIVERSAL DECIMAL CLASSIFICATION: 681.3:80 681.3:801.4

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: This paper reports the study results of the above research team in fiscal 1993. The research team belongs to the session for development and research in the technical workshop computer use. The present state and future trends were surveyed in connection with **natural language** processing technology applied to word processors, **data base retrieval** in natural languages, document proof-reading support systems, and **speech recognition**. In reference to trends in Japanese text formation technology, this paper describes the mechanism, principle, and future trend of Kana-Kanji conversion. The subject mainly reported in connection with **database retrieval** support systems is understanding of the meaning of the Japanese text. Morphological analysis and semantic analysis are the chief topics concerning document proofreading support systems. In reference to **speech recognition**, this paper describes **speech understanding** and **voice** interactions. This paper also describes composition software such as SGML and descriptive language DSSSL in the field of electronic publishing.

21/7/61 (Item 2 from file: 95)

DIALOG(R)File 95:TEME-Technology & Management

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01018736 E96096112021

Accessing computer-stored knowledge through spoken English

(Zugriff auf rechnergespeichertes Wissen ueber gesprochenes Englisch)

Frost, R

Univ. of Windsor, CDN

Intelligent Information Management Syst., Proc. of the IASTED/ISMM

Internat. Conf., Washington, USA, Jun 7-9, 19951995

Document type: Conference paper Language: English

Record type: Abstract

ISBN: 0-88986-216-8

ABSTRACT:

A prototype system for accessing computer-stored knowledge through spoken English has been built. This system uses a low-cost personal computer for **recognizing speech** input and delivering speech output. The PC is connected through a network to a program which allows non-visual browsing of hypertext documents. The program also allows simple **databases** to be **queried in natural language**. The prototype system illustrates how state-of-the-art **speech - recognition** technology, and state-of-the-art declarative-programming languages can be integrated to provide a user-friendly interface to knowledge, such as that on the rapidly-growing World-Wide-Web.

21/7/63 (Item 2 from file: 202)

DIALOG(R)File 202:Info. Sci. & Tech. Abs.

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3001340

Speech recognition and full-text retrieval: interface and integration.

Author(s): Feder, J D; Hobbs, E T

Publication Date: 1995

ISBN: 1-57387-004-8 Pages: 97-104

Publisher: Learned Information

Language: English

Place of Publication: United States

Document Type: Book Chapter

Record Type: Abstract

Journal Announcement: 3000

In a two-phase effort sponsored by both government and commercial organizations, **speech recognition** and a **natural language**-based full-text search system are being combined to enable robust, "hands-free" interaction for a range of **information retrieval** applications. One aspect of this combination is at the interface level, to **enable spoken commands** for software menu navigation, and full-text retrieval. At a more fundamental level of integration, this project is applying **natural language** processing techniques to greatly improve the state-of-the-art of **speech recognition**.

21/7/78 (Item 2 from file: 233)

DIALOG(R) File 233: Internet & Personal Comp. Abs.

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00342040 94IT03-031

Pace of legal technology furious, but functional

Griffith, Cary

Information Today, March 1, 1994, v11 n3 p64, 1 Page(s)

ISSN: 8755-6286

LEGAL LINE column discusses current and upcoming technologies in law offices. Says one dramatic trend includes more power, more speed, and more storage capacity of PCs for less money in a more compact system allowing attorneys to take the technology with them to a document production site or into the courtroom. Describes full-text **searchable databases**, coded **databases**, and databases with document images as being very powerful tools for attorneys. Says that West Publishing's **natural language** search engine, WIN, and its LawTALK, a **speech - recognition** product for computer-assisted legal research, are technologies which enable attorneys to access information more easily. Looks for future technologies to include handwriting recognition, smart searches, multimedia annotation, video teleconferencing, and virtual reality in the courtroom.

?

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Set	Items	Description
S1	3002645	VOICE OR SPEECH OR SPEAK??? ? OR SPOKE? ?
S2	93197	S1(2N) (RECOGNIT? OR RECOGNIS? OR RECOGNIZ?)
S3	11886	S1(2N) (UNDERSTAND? OR UNDERSTOOD? OR COMPREHEND? OR COMPREHENS?)
S4	119782	S1(2N) (COMMAND? ? OR CONTROLL? OR CONTROL??? ? OR ACTIVAT? OR ACTUAT? OR PROMPT? OR OPERAT???? ? OR ENABL? OR INABL?)
S5	4352703	SEARCH? OR QUERY? OR QUERIE? ? OR RETRIEV? OR SUBQUER? OR - ENQUIR? OR INQUIR? OR INTERROGAT? OR REQUEST? OR FETCH? OR IR
S6	967873	S5(3N) (DATA OR INFORMATION)
S7	116596	S5(3N) (DATABASE? OR DB OR KNOWLEDGEBASE? OR KNOWLEDGE()BASE? ? OR DATASET? OR DATABANK? OR DATAFILE? OR DATASYSTEM? OR - DATALIBRAR?)
S8	181576	S5(3N) (FILE OR FILES OR CONTENT? ? OR RECORD? ? OR REPORT? ? OR MESSAGE? ?)
S9	84167	S5(3N) (MEMORY? OR ARCHIV? OR STORAGE OR DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR REPOSITORIES OR WAREHOUSE? OR WAREHOUSE? ?)
S10	27293	NATURAL(W) LANGUAGE OR NLP
S11	3989	S2:S4(S)S6:S9
S12	305	S11(S)S10
S13	215	S12/1999:2004
S14	90	S12 NOT S13
S15	56	RD (unique items)

15/3,K/1 (Item 1 from file: 9)
 DIALOG(R)File 9:Business & Industry(R)
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2318810 Supplier Number: 02318810 (USE FORMAT 7 OR 9 FOR FULLTEXT)

Tech-Enabled Speech

(Fidelity Investments introducing new automated speech - recognition telephone system providing customers with account and mutual funds information , requested through natural language questions)

FutureBanker, v 2, n 11, p 33

November 1998

DOCUMENT TYPE: Journal ISSN: 1092-9061 (United States)

LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 270

(Fidelity Investments introducing new automated speech - recognition telephone system providing customers with account and mutual funds information , requested through natural language questions)

15/3,K/2 (Item 2 from file: 9)
DIALOG(R)File 9:Business & Industry(R)
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2084215 Supplier Number: 02084215 (USE FORMAT 7 OR 9 FOR FULLTEXT)
LERNOUT & HAUSPIE'S POPEYE READS YOUR EMAIL DOWN THE PHONE
(Lernout & Hauspie Speech Products developed a server solution allowing access to a speech user interface to access and send electronic mail via the telephone)
Computergram International, n 3364, p N/A
March 10, 1998
DOCUMENT TYPE: Newsletter ISSN: 0268-716X (United Kingdom)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 263

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...without the use of a computer. Popeye has been developed using Lernout & Hauspie's Automatic **Speech Recognition** , Text to **Speech** , Speech Compression and **Natural Language** Dialog Processing technologies. The ASR technology enables Popeye to listen and execute user commands while...

...a profile form. The information is then passed to a Popeye server via the internet. **Messages** are **retrieved** via a Speech User Interface connected to users' email, enabling them to read and reply...

15/3,K/3 (Item 3 from file: 9)
DIALOG(R)File 9:Business & Industry(R)
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1114950 Supplier Number: 01114950 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Speech finally recognized
(Speech recognition market totaled \$347.2 mil for 1994, with telephone applications holding a 28% share of applications)
Electronic Engineering Times, n 833, p 30
January 30, 1995
DOCUMENT TYPE: Journal; Industry Overview ISSN: 0192-1541 (United States)
LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 1010

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:
...report generation, tracking assistance and education and training.

Kolvox Communications Inc. (Toronto) has developed a **speech - recognition** -driven interface to a sophisticated legal-data system allowing the user to access information from phone lines. Kolvox and West Publishing integrated two software programs that included West's **natural - language** search method, permitting users to perform **voice - activated** on-line **searching** and **information retrieval** from more than 5,000 databases. Users can also use **speech commands** to create legal documents with WordPerfect.

Integrated hybrid

In the same genre, Integrated Speech Solutions...

15/3,K/4 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05839724 Supplier Number: 50351439 (USE FORMAT 7 FOR FULLTEXT)

L&H melds technologies

Fischer, Christina

The Seybold Report on Publishing Systems, v28, n3, pNA

Oct 12, 1998

Language: English Record Type: Fulltext

Article Type: Article

Document Type: Newsletter; Trade

Word Count: 1423

... the marriage of machine translation and information management in the Europol trial (see p. 28).

Voice - enabled Excalibur RetrievalWare. A new licensing, integration and distribution agreement with Excalibur Technologies further expands L...

...Excalibur RetrievalWare, a search-and-retrieval application that combines advanced pattern recognition with concept-based, **natural - language** searching. (See our 1996 feature article on **RetrievalWare** in The Seybold **Report** on Desktop Publishing, Vol. 10, No. 10.)

L&H is expected to integrate RetrievalWare into...

15/3,K/5 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05824620 Supplier Number: 50333181 (USE FORMAT 7 FOR FULLTEXT)

THE FULL MONTY

Jainschigg, John

Computer Telephony, pS8

Sept, 1998

Language: English Record Type: Fulltext

Document Type: Magazine/Journal; Trade

Word Count: 1292

... the workstation speaker.

American Airlines just used VPS/is Interactive Voice Response (IVR) systems (with **speech recognition** and **natural language** understanding software from Nuance Communications) to create an application that head-ends AA's priority...

...members dial American's 800 number and speak their aLpha-numeric account number, the IVR **retrieves** member **information** from an SQL database and pops it onto the agent's terminal at the same...

15/3,K/6 (Item 3 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05790861 Supplier Number: 50280886 (USE FORMAT 7 FOR FULLTEXT)
Microsoft President Steve Ballmer Announces Encarta Reference Suite 99
PR Newswire, p0902SFW011
Sept 2, 1998
Language: English Record Type: Fulltext
Article Type: Article
Document Type: Newswire; Trade
Word Count: 1138

... 8,000 new articles -- 20 million words and thousands of multimedia elements. The encyclopedia features **Natural Language** Query, a new technology that allows users to **search for information** by typing in questions in plain English, such as "What's the highest mountain in...

...control and text-to-speech technology, which allows users to navigate through the encyclopedia using **spoken commands** and hear text read aloud by a synthesized voice.

Encarta Virtual Globe 99 starts with...

15/3,K/7 (Item 4 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05731843 Supplier Number: 50210417 (USE FORMAT 7 FOR FULLTEXT)
American Airlines Deploys Natural Language Speech Recognition System with Technology from Periphonics and Nuance.
Business Wire, p07291417
July 29, 1998
Language: English Record Type: Fulltext
Article Type: Article
Document Type: Newswire; Trade
Word Count: 800

... s top travelers.
Using VPS/is Interactive Voice Response (IVR) systems from Periphonics Corporation with **speech recognition** and lnatural language understanding software from Nuance Communications, the new application replaces an existing service limited to touch-tone and supported by PC-based IVR systems from another vendor. The new system **retrieves** customer **information** through an interface with American's AAdvantage system developed by the SABRE Group. The system...

15/3,K/8 (Item 5 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05509462 Supplier Number: 48348017 (USE FORMAT 7 FOR FULLTEXT)
COMBINED ISSUE: LERNOUT & HAUSPIE'S POPEYE READS YOUR EMAIL DOWN THE PHONE
Computergram International, n3364, pN/A
March 10, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 261

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...without the use of a computer. Popeye has been developed using Lernout &

Hauspie's Automatic **Speech Recognition** , Text to **Speech** , Speech Compression and **Natural Language** Dialog Processing technologies. The ASR technology enables Popeye to listen and execute user commands while...

...a profile form. The information is then passed to a Popeye server via the internet. **Messages** are **retrieved** via a Speech User Interface connected to users' email, enabling them to read and reply...

15/3,K/9 (Item 6 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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05498478 Supplier Number: 48332213 (USE FORMAT 7 FOR FULLTEXT)
fonix to Acquire AcuVoice
PR Newswire, p0302LAM067
March 2, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 760

... the fonix and AcuVoice technologies will provide users with multi-modal, voice-in voice-out **natural language** ASR access to their computers, enabling them to **retrieve** and edit **databases** , documents and E-mails by talking aloud in a natural speaking voice," added Studdert. "AcuVoice technology and fonix **speech recognition** technologies create a synergy that will accelerate development of new business in a wide range...

...with our three-pronged earnings strategy positioning fonix to become the industry leader in automatic **speech recognition** technologies," he said.

AcuVoice is being acquired in its entirety by fonix corporation. The terms...

15/3,K/10 (Item 7 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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04376053 Supplier Number: 46417797 (USE FORMAT 7 FOR FULLTEXT)
DIGITAL BRINGS NETWORKED NEW MEDIA TO THE ENTERPRISE
PR Newswire, p528NETU018
May 28, 1996
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 985

... at Carnegie Mellon University in Pittsburgh is currently developing a system which will allow full **content search** and **retrieval** of new media by integrating current research in **speech recognition** , image analysis, and **natural language** processing technologies. CMU is developing a way to access relevant video and audio segments from...
? t15/3,k/12-13,26-31

15/3,K/12 (Item 9 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)
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01271367 Supplier Number: 41481606
MUSE (TM) INTRODUCED BY OCCAM RESEARCH CORP.
News Release, p1

August 6, 1990
Language: English Record Type: Abstract
Document Type: Magazine/Journal; Trade

ABSTRACT:

...introduced today by Occam Research Corp. to bring users a new level of control over **data retrieval**, manipulation and visualization. MUSE converts raw data into finished analysis faster than any other program...

...simultaneously reference, manipulate, reformat, calculate and visualize large data sets. Its strength lies in its **natural language** core, which boasts an advanced data dictionary that expands to reflect the individual user's...

...to be displayed on a Workbook with precisely the level of detail needed. MUSE's **natural language** architecture also has the potential to utilize input and output for questions and answers beyond keyboard and display, including devices performing **speech recognition**, **speech** generation and handwriting recognition. ...

15/3,K/13 (Item 1 from file: 47)
DIALOG(R)File 47:Gale Group Magazine DB(TM)
(c) 2004 The Gale group. All rts. reserv.

05169796 SUPPLIER NUMBER: 20846847 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Schwab Puts Stock in Voice Recognition. (Company Operations)

Smith, Laura B.

PC Week, v15, n25, p95(1)

June 22, 1998

ISSN: 0740-1604 LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 1268 LINE COUNT: 00102

... purchasing stock or tracking a package.

At least until recently. In the past 18 months, **speech recognition** technology has matured to the point where such early adopters as Schwab; Sears, Roebuck and Co.; and United Parcel Service of America Inc. are using it to advantage. **Speech recognition** software, which works with IVR Touch-Tone systems, lets callers **request information in natural language**.

"Much as I hate to use the word, it's a paradigm shift for the...

15/3,K/26 (Item 8 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

04842922 SUPPLIER NUMBER: 09579461 (USE FORMAT 7 OR 9 FOR FULL TEXT)
IBM database announcements. (product announcement)

Computergram International, n1550, CGI11080008

Nov 8, 1990

DOCUMENT TYPE: product announcement ISSN: 0268-716X LANGUAGE:
ENGLISH RECORD TYPE: FULLTEXT

WORD COUNT: 1035 LINE COUNT: 00087

... natural language query interface to DB2 and SQL/Data System. IBM says that users can **retrieve information** from the relational databases by formulating questions in their own **natural language** without having to know a formal query language or having any understanding of database organisation...

...have limited availability from June 1991, general availability from December 1991. LanguageAccess consists of a **natural language** engine, a query interface and customisation tool. The first analyses input queries, translates them into SQL statements and generates **natural language** paraphrases to support query confirmation. A query interface is provided for Query Management Facility and...

15/3,K/27 (Item 9 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2004 The Gale Group. All rts. reserv.

04158464 SUPPLIER NUMBER: 07985930 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Amino acids: The future of computing in the 1990s?
Leary, Ed
Journal of Systems Management, v40, n12, p23(8)
Dec, 1989
ISSN: 0022-4839 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 5339 LINE COUNT: 00439

... place in natural language sentences. This technology has also been put to practical use in **requesting information** from a **data** base using a **natural language** sentence. For example, we could **retrieve** the personnel **record** of John Smith with the statement: Tell me about John Smith.

While this technology has...

15/3,K/28 (Item 1 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
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01808083
AI R&D Exploding But Who Will Reap The Rewards
Computerdata November, 1987 p. 13,14
ISSN: 0025-9535

Artificial intelligence relates to several disciplines, including **natural language** processing (**NLP**), computer vision, **speech recognition** , robotics and expert systems. **NLP** , whose first notable application was the ill-fated Machine Translator, is now at a point...

... systems can be used to interface to a limited set of computer applications such as **database retrieval** systems where ambiguities are excluded. Examples of **NLP** systems are Intellect, SAVVY, and ALPS. Computer vision, one of the more commercially advanced fields...

... Computer vision's major drawback is the processing speed required to compete with human vision. **Speech recognition** systems can accommodate input from a speaker who must pause between words. Although vocabularies accommodated...

15/3,K/29 (Item 2 from file: 160)
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01769897
NEW 1000-WORD SPEECH RECOGNITION SYSTEM FROM CHERRY BRINGS HANDS- FREE

ENTRY OF COMMANDS AND DATA TO XT AND AT COMPATIBLES

News Release June, 1987 p. 1

The new VoiceScribe 1000 **speech recognition** system from Cherry Electrical Products lets users of IBM XT and AT compatible computers input commands or data using **natural language** rather than 'hands-on' devices such as keyboard, mouse, touch-screen, etc. The system is...

... fast retraining of the system to recognise a new user's voice. Cherry's new **speech recognition** system can be usefully employed in various Office Automation applications including **database enquiry**, spreadsheet accounting, and wordprocessing. The effective use of CAD/CAM and CAE packages is also...

15/3,K/30 (Item 3 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

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01730131

Ricoh Sets Up U.S. Research Laboratory

Comline Computers June 26, 1987 p. 1

...Semantics Corp. (California). The two companies will jointly develop a voice retrieval system that can **retrieve information** from a **data base** using spoken language. Prototypes have been completed in both English and German. The system combines "Q&A," a **natural - language data base** package developed by Semantics, with a **voice recognition** system developed by Ricoh. With it, a user can **retrieve data** from a **database** by speaking to the computer, instead of using a keyboard.

Ricoh is also preparing to...

15/3,K/31 (Item 4 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

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01490632

VOICEWRITING BECOMES A REALITY.

NEWS RELEASE May, 1986 p. 11

... in a high noise environment. Voicescribe (TM) -1000 is a 1,000 word active vocabulary **speech recognition** capability that runs near real-time on a personal computer with an 8 MHz 80286...

... a large vocabulary artificial language recognition system, Voicescribe (TM) -1000 is also capable of limited **natural language** recognition tasks. It can be used for dictation of informal notes and documents with a ...

... the artificial language recognition applications of small vocabulary recognizers, such as command and control and **data entry and retrieval**.
? t15/3,k/32-33,36-37,39,41,44-50

15/3,K/32 (Item 5 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

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01319227

Industry:Peripherals:Kurzweil prepares voice typewriter for late 1986.

Kurzweil Applied Intelligence (US)) will market a **voice - activated** typewriter in 1986. The company has a laboratory version of the device which takes speech...

... which fits all the criteria. The machine is likely to be used for dictation and **natural language queries to databases**.

15/3,K/33 (Item 6 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
(c) 1999 The Gale Group. All rts. reserv.

01146115

Artificial Intelligence: The Next Big Step In Automation.
OFFICE ADMINISTRATION & AUTOMATION October, 1984 p. 35-37

Artificial intelligence, **voice recognition** and expert and **natural language** systems will greatly affect office automation in the near future. Widespread commercialization of most artificial intelligence applications is 5-10 years away, but **natural language for information retrieval** is currently available. **Natural language** systems replace or supplement command and menu-driven systems and offer the ability to ask ...

15/3,K/36 (Item 9 from file: 160)
DIALOG(R)File 160:Gale Group PROMT(R)
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00987251

Derwent Data Systems will launch its advanced speech recognition system that it claims may be the world's first to respond to complete sentence commands rather than individual word orders.
MIS Week January 11, 1984 p. 31

The new software is based on Derwent's **natural language database , Retrieve** . The system will respond to verbal instructions and answer each sentence aloud with the aid...

... Supersoft, Derwent's US associate, distributes Retrieve to US customers and will begin making the **voice recognition** system under license for sale in 2/84. ...

15/3,K/37 (Item 1 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01688364 SUPPLIER NUMBER: 15511825 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Lessons from a restricted Turing test. (artificial intelligence in computers)

Shieber, Stuart M.
Communications of the ACM, v37, n6, p70(9)
June, 1994

ISSN: 0001-0782 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 8707 LINE COUNT: 00689

... not yield a concomitant limitation in task.

It is well understood in the field that **natural language** systems must be tested using a constrained task. Currently, standard limited tasks can be found in evaluation of **natural language database retrieval** systems (such as withdrawing money from a bank account on the basis of a **natural language** request) and **speech recognition** systems (such as transcribing a spoken funds transfer request). The tasks, typically undertaken with limited...

...adjusted to sit just at the edge of technology, unlike the Turing Test itself. The **natural language** research community has used such tests for some time now, and there has been increased...

15/3,K/39 (Item 3 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01518276 SUPPLIER NUMBER: 12226142 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Integrating an electronic dictionary into a natural language processing system. (Technical)
Roberts, Diana C.
Hewlett-Packard Journal, v43, n3, p54(12)
June, 1992
DOCUMENT TYPE: Technical ISSN: 0018-1153 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 9042 LINE COUNT: 00792

... scheme (such as HP-NL).
Some types of software applications that match these characteristics are **natural language** processing, **speech** generation and **recognition**, document input, document management, and **information retrieval**.
The electronic dictionary in turn should possess the following characteristics:

* Data accessible to software application...Hewlett-Packard Laboratories has successfully integrated one electronic dictionary, the CELEX lexical database, into its **natural language** processing system. Other software applications that could use the extensive information available in electronic dictionaries are **speech** generation and **recognition**, document input such as optical character recognition and "smart" keyboards, document management such as spelling and grammar checking, and **information retrieval**.

Acknowledgments
I would like to thank the following people for related discussions:
Brett Kessler, Dan...

15/3,K/41 (Item 5 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01288595 SUPPLIER NUMBER: 07059206 (USE FORMAT 7 OR 9 FOR FULL TEXT)
High level knowledge sources in usable speech recognition systems. (technical)
Young, Sheryl R.; Hauptmann, Alexander G.; Ward, Wayne H.; Smith, Edward T.; Werner, Philip
Communications of the ACM, v32, n2, p183(12)
Feb, 1989
DOCUMENT TYPE: technical ISSN: 0001-0782 LANGUAGE: ENGLISH
RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 8738 LINE COUNT: 00709

... Nevertheless, the principles of using a user model, task semantics and situational semantics are valid.

* **Natural Language Back-Ends.** Several **speech recognition** systems claim to have a dialogue, discourse or pragmatic components. However, most of these systems only use this knowledge just like any typed **natural language** understanding system would. The speech input is processed by a **speech recognition** module which uses all its constraints up through the level of semantic grammars to arrive at a single best sentence candidate. This sentence is then transformed into the appropriate **database query**, anaphoric references are resolved, elliptic utterances are completed and the discourse model is updated. All these higher level procedures are applied after the sentence is completely **recognized** by the **speech** front-end. There is no interaction between the **natural language** processing modules and the **speech recognizer**.

Natural Language Research

There has been much research on discourse, focus, planning, inference and problem...

15/3,K/44 (Item 8 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

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01058143 SUPPLIER NUMBER: 00549343

Artificial Intelligence Is Still Mostly Ideas.

Raleigh, L.

Micro Marketworld, v7, n9, p49

May 7, 1984

ISSN: 0746-6765

LANGUAGE: ENGLISH

RECORD TYPE: ABSTRACT

...ABSTRACT: artificial intelligence (AI) are expected to appear on the market. AI applications include strategy games, **voice - speech recognition** systems, robotics, expert systems and **natural language** interfaces. Expert systems and **natural language** systems are expected to appear in the near future. Expert systems require less processing speed and main memory than **natural language** systems. The expert system can be an open-ended system or turnkey package. The **natural language** system enables an untrained user to easily **query** a **database** system.

15/3,K/45 (Item 9 from file: 275)

DIALOG(R)File 275:Gale Group Computer DB(TM)

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01056654 SUPPLIER NUMBER: 00528279

IBM-PC Will Soon be Able to Listen.

Hunter, P.

Computer Weekly, n892, p6

Jan. 5, 1984

DOCUMENT TYPE: product announcement

ISSN: 0010-4787

LANGUAGE:

ENGLISH

RECORD TYPE: ABSTRACT

ABSTRACT: Derwent Data, a British-based software house, has adapted **Retrieve**, its **natural language data base inquiry** package, to work with a microphone and **speech recognition** board giving the IBM PC **voice recognition** capabilities. The complete system will sell for 1,500 pounds. It has a vocabulary of...

15/3,K/46 (Item 10 from file: 275)
DIALOG(R)File 275:Gale Group Computer DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

01056583 SUPPLIER NUMBER: 00599248
Artificial Intelligence: Out of the Lab, into the Workplace.
Seaman, J.
Computer Decisions, v16, n10, p98-102
Aug., 1984
DOCUMENT TYPE: interview ISSN: 0898-1825 LANGUAGE: ENGLISH
RECORD TYPE: ABSTRACT

...ABSTRACT: best take advantage of the commercial and practical applications of AI. The applications discussed included **natural - language database - query** software, expert systems, robotics, automatic programming, and lvoice and vision **recognition** . AI is defined. Management must be shown that can streamline operations and reduce costs. Japanese...

15/3,K/47 (Item 1 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

04043449 Supplier Number: 53413327 (USE FORMAT 7 FOR FULLTEXT)
DRAGON SYSTEMS: Dragon unveils world's first mobile "Natural Speech Organizer".
M2 Presswire, pNA
Nov 17, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1378

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...revolutionary new product not only contains the state-of-the-art, award-winning Dragon NaturallySpeaking **speech recognition** software, but also includes a powerful assistant that responds to the spoken word to generate...

...and more, followed by dictated text. The system recognizes the text and identifies the naturally **spoken commands** . If needed, it will **retrieve information** necessary to carry out the task, such as attaching a document to an e-mail...

...is a revolutionary product that opens up a significant new era in the use of **speech recognition** systems. It can become your personal assistant even when you don't have a PC...

...Timeslips. It comes complete with a copy of the widely acclaimed, award-winning Dragon NaturallySpeaking **speech recognition** software with a high quality headset microphone for use with a PC, the Dragon NaturallyMobile...

...for the recorder, and revolutionary new software that uses a patent-pending process to convert **recognized speech** into actions. The Dragon NaturallyMobile digital recorder is the world's first digital recorder specifically designed for **speech recognition** . It is light weight (approximately 4 oz), ergonomically designed and fits comfortably in the palm...

...it is automatically delivered. Users can generate a variety of action items using the same **natural language** that one might use with a human assistant. Some examples include: * "Send email to Joel...consumer electronics, and office supply retailers. Dragon Systems, Inc., is a worldwide leader in PC **speech recognition**. Dragon develops and markets high-performance, cost-effective speech and language technology that, in multiple...

...is headquartered in Newton, Massachusetts; its Dragon Systems UK Ltd. subsidiary, which is focused on **speech recognition** for telephony and high-noise environments, is based in Cheltenham, England; Dragon Systems GmbH is...

15/3,K/48 (Item 2 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

03972725 Supplier Number: 53007739 (USE FORMAT 7 FOR FULLTEXT)
MICROSOFT: Microsoft President Steve Ballmer announces Encarta Reference Suite 99.
M2 Presswire, pNA
Sept 7, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 1045

... 8,000 new articles - 20 million words and thousands of multimedia elements. The encyclopedia features **Natural Language Query**, a new technology that allows users to **search for information** by typing in questions in plain English, such as "What's the highest mountain in..."

...control and text-to-speech technology, which allows users to navigate through the encyclopedia using **spoken commands** and hear text read aloud by a synthesized voice.

Encarta Virtual Globe 99 starts with...

15/3,K/49 (Item 3 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

03932896 Supplier Number: 50208225 (USE FORMAT 7 FOR FULLTEXT)
AMERICAN AIRLINES: American Airlines deploys Natural Language speech recognition system
M2 Presswire, pN/A
July 30, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 888

... s top travelers.

Using VPS/is Interactive Voice Response (IVR) systems from Periphonics Corporation with **speech recognition** and **natural language** understanding software from Nuance Communications, the new application replaces an existing service limited to touch-tone and supported by PC-based IVR systems from another vendor. The new system **retrieves** customer **information** through an interface with American's AAdvantage system developed by the SABRE Group. The system...

15/3,K/50 (Item 4 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

03902360 Supplier Number: 50079192 (USE FORMAT 7 FOR FULLTEXT)
PHILIPS: Multimedia on the street -- speech driven information kiosks
M2 Presswire, pN/A
June 16, 1998
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 583

... and friendly approach to searching out the best places to stay in a strange town

Speech recognition for rapid information retrieval The key is Philips Speech Processing's continuous **speech recognition** know-how. A computer analyses the user's spoken request. Applying **natural language** understanding, the system can handle complex requests, making allowances for regional dialects and poor grammar...
? t15/3,k/52-53,55

15/3,K/52 (Item 6 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

03377171 Supplier Number: 46946523 (USE FORMAT 7 FOR FULLTEXT)
Nuance Communications announced that it is bringing its intuitive speech recognition with natural language understanding to IBM's DirectTalk/6000 platform.
Report on IBM, v13, n48, pN/A
Dec 4, 1996
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 162

Nuance's conversational transaction technology is comprised of **speech recognition** with **natural language** understanding that allows callers to speak in everyday conversational English. Charles Schwab is currently using...

...New York Stock Exchange, the American Stock Exchange and Nasdaq systems through simple, natural phrased **inquiries**.

Additional **information** can be obtained at www.raleigh.ibm.com/callpath. Nuance Communications is headquartered in Menlo...

15/3,K/53 (Item 7 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

03218794 Supplier Number: 46598100 (USE FORMAT 7 FOR FULLTEXT)
NETWORKED MEDIA BROUGHT TO THE ENTERPRISE
Networks Update, v8, n8, pN/A
August 1, 1996
Language: English Record Type: Fulltext
Document Type: Newsletter; Trade
Word Count: 819

... at Carnegie Mellon University in Pittsburgh is currently developing a system which will allow full **content search** and **retrieval** of new media by integrating current research in **speech recognition**, image analysis, and **natural language** processing technologies. CMU is developing a way to access relevant video and audio segments from...

15/3,K/55 (Item 9 from file: 636)
DIALOG(R)File 636:Gale Group Newsletter DB(TM)
(c) 2004 The Gale Group. All rts. reserv.

02514859 Supplier Number: 45058760 (USE FORMAT 7 FOR FULLTEXT)
CARNEGIE MELLON UNIVERSITY WINS \$4.5m GRANT TO DEVELOP ON-LINE EDUCATIONAL
INTERACTIVE DIGITAL VIDEO LIBRARY

Computergram International, n2520, pN/A
Oct 12, 1994
Language: English Record Type: Fulltext
Document Type: Newswire; Trade
Word Count: 397

(USE FORMAT 7 FOR FULLTEXT)
TEXT:

...created by Carnegie Mellon and public television station
WQED/Pittsburgh, will integrate speech, image and **natural language**
understanding technologies developed by university researchers to access,
explore and retrieve video material from the archives of public television
and educational institutions. Users will be able to **search** through the
complete **content** of the stored video, retrieve segments of interest and
view them on the screens of...

...fetching via the Internet. A derivative of Carnegie Mellon's Sphinx 2, a
highly accurate, **speaker** -independent **speech recogniser**, will
automatically transcribe video sound tracks, which will then be stored in a
full-text **information retrieval** system developed at the university's
Center for Machine Translation. The system enables rapid retrieval...
?

File 696:DIALOG Telecom. Newsletters 1995-2004/May 10
(c) 2004 The Dialog Corp.
File 15:ABI/Inform(R) 1971-2004/May 10
(c) 2004 ProQuest Info&Learning
File 98:General Sci Abs/Full-Text 1984-2004/May
(c) 2004 The HW Wilson Co.
File 141:Readers Guide 1983-2004/May
(c) 2004 The HW Wilson Co
File 484:Periodical Abs Plustext 1986-2004/May W1
(c) 2004 ProQuest
File 553:Wilson Bus. Abs. FullText 1982-2004/May
(c) 2004 The HW Wilson Co
File 813:PR Newswire 1987-1999/Apr 30
(c) 1999 PR Newswire Association Inc
File 635:Business Dateline(R) 1985-2004/May 08
(c) 2004 ProQuest Info&Learning
File 810:Business Wire 1986-1999/Feb 28
(c) 1999 Business Wire
File 369:New Scientist 1994-2004/May W1
(c) 2004 Reed Business Information Ltd.
File 370:Science 1996-1999/Jul W3
(c) 1999 AAAS
File 20:Dialog Global Reporter 1997-2004/May 11
(c) 2004 The Dialog Corp.
File 624:McGraw-Hill Publications 1985-2004/May 10
(c) 2004 McGraw-Hill Co. Inc
File 634:San Jose Mercury Jun 1985-2004/May 09
(c) 2004 San Jose Mercury News
File 647:CMP Computer Fulltext 1988-2004/May W1
(c) 2004 CMP Media, LLC
File 674:Computer News Fulltext 1989-2004/May W1
(c) 2004 IDG Communications

Set	Items	Description
S1	4182383	VOICE OR SPEECH OR SPEAK??? ? OR SPOKE? ?
S2	48769	S1(2N) (RECOGNIT? OR RECOGNIS? OR RECOGNIZ?)
S3	13082	S1(2N) (UNDERSTAND? OR UNDERSTOOD? OR COMPREHEND? OR COMPREHENS?)
S4	68119	S1(2N) (COMMAND? ? OR CONTROLL? OR CONTROL??? ? OR ACTIVAT? OR ACTUAT? OR PROMPT? OR OPERAT???? ? OR ENABL? OR INABL?)
S5	5536197	SEARCH? OR QUERY? OR QUERIE? ? OR RETRIEV? OR SUBQUER? OR - ENQUIR? OR INQUIR? OR INTERROGAT? OR REQUEST? OR FETCH? OR IR
S6	713285	S5(3N) (DATA OR INFORMATION)
S7	55544	S5(3N) (DATABASE? OR DB OR KNOWLEDGE? OR KNOWLEDGE()BASE- E? ? OR DATASET? OR DATABANK? OR DATAFILE? OR DATASYSTEM? OR - DATALIBRAR?)
S8	127189	S5(3N) (FILE OR FILES OR CONTENT? ? OR RECORD? ? OR REPORT? ? OR MESSAGE? ?)
S9	44452	S5(3N) (MEMORY? OR ARCHIV? OR STORAGE OR DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR REPOSITORIES OR WAREHOUSE? OR WAR- E()HOUSE? ?)
S10	13556	NATURAL(W)LANGUAGE OR NLP
S11	1820	S2:S4(S)S6:S9
S12	131	S11(S)S10
S13	84	S12/1999:2004
S14	47	S12 NOT S13
S15	36	RD (unique items)

15/3,K/1 (Item 1 from file: 696)
DIALOG(R)File 696:DIALOG Telecom. Newsletters

(c) 2004 The Dialog Corp. All rts. reserv.

00645125

Lucent, Unisys Get Behind The Wheel Of Natural Language Speech Market
COMMUNICATIONS TODAY

December 17, 1998 DOCUMENT TYPE: NEWSLETTER

PUBLISHER: PHILLIPS BUSINESS INFORMATION

LANGUAGE: ENGLISH

WORD COUNT: 399

RECORD TYPE: FULLTEXT

(c) PHILLIPS PUBLISHING INTERNATIONAL All Rts. Reserv.

TEXT:

Lucent Technologies [LU] is looking to take the driver's seat in the emerging **natural language** speech market by joining with Unisys [UIS] to package applications in telephony and interactive voice...

...software package that would bring together Lucent's text-to-speech (TTS) synthesis and automatic **speech recognition** engines with Unisys' **natural language** speech assistant toolkit. The package targets speech developers working on interactive voice response and telephony...

...SpeechWorks (formerly named ALTech), and Menlo Park, Calif.-based Nuance Communications, current leaders in the **speech recognition** engine market, have engines that only allow for applications to be run on their platforms...

...is eyeing the effectiveness of the package in several application areas, including call centers, general **information inquiries** and **retrieval**, desktop applications and the evolving world of the Internet, Holmgren said. (John Holmgren, Lucent Technologies...

15/3,K/4 (Item 3 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2004 ProQuest Info&Learning. All rts. reserv.

01607524 02-58513

Speech recognition for a digital video library

Witbrock, Michael J; Hauptmann, Alexander G

Journal of the American Society for Information Science v49n7 PP: 619-632

May 15, 1998

ISSN: 0002-8231 JRNL CODE: ASI

ABSTRACT: By applying **speech recognition** together with **natural language** processing, **information retrieval** and image analysis, an interface has been produced that helps users locate the information they want, and navigate or browse the digital video library more effectively. Some experimental **information retrieval** results are given supporting a basic premise of the Informedia Digital Video Library: that **speech recognition** generated transcripts can make multimedia material searchable. The Informedia project emphasized the integration of **speech recognition**, image processing, **natural language** processing and **information retrieval** to compensate for deficiencies in these individual technologies. ...

15/3,K/6 (Item 5 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2004 ProQuest Info&Learning. All rts. reserv.

01568922 02-19911

Networking in 2005: Its only limitations may be the boundaries of imagination

Butters, Gerry

Telecommunications (Americas Edition) v32n1 PP: 39-41 Jan 1998

ISSN: 0278-4831 JRNL CODE: TEC

WORD COUNT: 1947

...TEXT: your intelligent virtual representative, has authenticated the caller by voice print and, using next generation **voice recognition** and synthesis, has engaged the customer with **natural language** as to his **request**. Accessing corporate **files** and recognizing that the volume of business with this customer is under the threshold that...

15/3,K/7 (Item 6 from file: 15)

DIALOG(R)File 15:ABI/Inform(R)

(c) 2004 ProQuest Info&Learning. All rts. reserv.

01524803 01-75791

Natural language modernizes the call center

Barchard, Richard

Telemarketing & Call Center Solutions v16n3 PP: 34-42 Sep 1997

ISSN: 0730-6156 JRNL CODE: TLM

WORD COUNT: 344

...TEXT: What days are you open?"

"Do you sell second-hand tractors?"

Before the advent of **natural language** understanding (NLU) technology, such questions could tie up armies of customer service representatives while other...

... of choices on each menu that callers can remember. Now, the next generation of automatic **speech recognition** combined with **natural language** technology can be used to create robust, context-based, intelligent voice user interface applications for...

...on ad infinitum, the new systems allow callers to use their voice to ask for **information** or make a **request** in their own way.

The Weight Of The Evidence

In 1995, Call Center Enterprises, Inc...

15/3,K/19 (Item 1 from file: 553)

DIALOG(R)File 553:Wilson Bus. Abs. FullText

(c) 2004 The HW Wilson Co. All rts. reserv.

03084681 H.W. WILSON RECORD NUMBER: BWBA95084681 (USE FORMAT 7 FOR FULLTEXT)

Automatic speech recognition: an emerging interface for multimedia applications.

Fried, Louis

Information Systems Management (Inf Syst Manage) v. 13 (Winter '96) p. 29-37

LANGUAGE: English

WORD COUNT: 6008

(USE FORMAT 7 FOR FULLTEXT)

TEXT:

... typing systems.

In mid-1994, West Publishing and Kolvox Communications announced the LawTalk large vocabulary **speech recognition** front-end to the WestLaw online legal research system. The system uses Dragon Systems' DragonDictate...

...The PC-based application then translates the speaker's query and interfaces to the online **data** base. **Queries** may be stated in either a formula-like Boolean expression or in **natural language**. The speech interface is further combined with a WordPerfect speech interface that allows users to...

? t15/3,k/20,22,23-26,31-32,35-36

15/3,K/20 (Item 1 from file: 813)

DIALOG(R)File 813:PR Newswire

(c) 1999 PR Newswire Association Inc. All rts. reserv.

1352394

LATU065

webMethods Joins V-Commerce Alliance; Enters Co-Marketing Agreement With Nuance

DATE: October 6, 1998

12:20 E.T.

WORD COUNT: 820

...exchange of data between applications, Web sites legacy data sources and ERP applications, Nuance-based **natural language speech recognition** systems can be deployed up to 50% faster, since it reduces the need to integrate...

... data from an existing Web site and create an application. A Nuance-enabled application then **requests information** for specific fields such as departure cities or equity name and the request is sent...

15/3,K/22 (Item 3 from file: 813)

DIALOG(R)File 813:PR Newswire

(c) 1999 PR Newswire Association Inc. All rts. reserv.

1235833

LAM067

fonix to Acquire AcuVoice

DATE: March 2, 1998

10:02 EST

WORD COUNT: 743

...the fonix and AcuVoice technologies will provide users with multi-modal, voice-in voice-out **natural language** ASR access to their computers, enabling them to **retrieve** and edit **databases**, documents and E-mails by talking aloud in a natural speaking voice," added Studdert. "AcuVoice technology and fonix **speech recognition** technologies create a synergy that will accelerate development of new business in a wide range...

...with our three-pronged earnings strategy positioning fonix to become the industry leader in automatic **speech recognition** technologies," he said.

AcuVoice is being acquired in its entirety by fonix corporation. The terms...

15/3,K/23 (Item 4 from file: 813)
DIALOG(R)File 813:PR Newswire
(c) 1999 PR Newswire Association Inc. All rts. reserv.

0954659 NETU018
DIGITAL BRINGS NETWORKED NEW MEDIA TO THE ENTERPRISE

DATE: May 28, 1996 08:45 EDT WORD COUNT: 971

...at Carnegie Mellon University in Pittsburgh
is currently developing a system which will allow full content search
and retrieval of new media by integrating current research in speech
recognition, image analysis, and natural language processing
technologies. CMU is developing a way to access relevant video and
audio segments from...

15/3,K/24 (Item 1 from file: 635)
DIALOG(R)File 635:Business Dateline(R)
(c) 2004 ProQuest Info&Learning. All rts. reserv.

0762307 97-20840
Ask, and ye shall compute
Harrison, Ann
MASS HIGH TECH (Watertown, MA, US), V14 N41 p1
PUBL DATE: 961201
WORD COUNT: 992
DATELINE: Cambridge, MA, US, New England

TEXT:

...challenging technical requirement that have taken years to refine.

In order to respond to a Spoken command, a computer must first
recognize every word in the sentence, parse the sentence into grammatical
elements, understand the meaning and act on it. A spoken command is
first processed by speech recognition software, then by a natural
language component which interprets the meaning of the word This data
then used to retrieve appropriate information in the form of text,
tables and graphics, which appear on a computer screen. Data...

15/3,K/25 (Item 2 from file: 635)
DIALOG(R)File 635:Business Dateline(R)
(c) 2004 ProQuest Info&Learning. All rts. reserv.

0556309 95-11831
Eagan company is facing questions about its traditional recipe for success
Oslund, John J
Star Tribune (Minneapolis, MN, US) sD p1
PUBL DATE: 941128
WORD COUNT: 1,258
DATELINE: Eagan, MN, US

TEXT:

...brought fresh entrepreneurial blood to the organization.

Opperman also points to such West innovations as natural - language

search capability on the WESTLAW database , voice - actuation searches and a new graphical user interface for WESTLAW users. On the print side, West invested...

15/3,K/26 (Item 1 from file: 369)
DIALOG(R)File 369:New Scientist
(c) 2004 Reed Business Information Ltd. All rts. reserv.

00100857 14219193.100 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Common sense & the computer: There is no easy way to teach a computer all the things that humans take for granted .. like the fact that it cannot be in two places at once

DAVIDSON, CLIVE
New Scientist, vol. 142, no. 1919, p. Page 30
April 2, 1994
LANGUAGE: English RECORD TYPE: Fulltext DOC. TYPE: Journal
WORD COUNT: 2354

(USE FORMAT 7 OR 9 FOR FULLTEXT)

TEXT:

...to add Cyc to applications that people want to use. Besides the obvious applications in **natural language** interfaces that enable computer users to use everyday written language to communicate with their machines and in **speech recognition** , Lenat suggests a plethora of ways to use Cyc. These range from 'smart' spreadsheets, **databases** and image **retrieval** systems to automatic brokering of share dealing. In a smart spreadsheet or database, for example...
...a person had listed themselves as their contact in an emergency. In a smart image **retrieval** system for a **database** of many thousands of photographs, Cyc could help match a query such as: 'Show me...

15/3,K/31 (Item 5 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2004 The Dialog Corp. All rts. reserv.

01974100 (USE FORMAT 7 OR 9 FOR FULLTEXT)
PHILIPS: Multimedia on the street -- speech driven information kiosks
M2 PRESSWIRE
June 16, 1998
JOURNAL CODE: WMPR LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 539

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... s continuous speech recognition know-how. A computer analyses the user's spoken request. Applying **natural language** understanding, the system can handle complex requests, making allowances for regional dialects and poor grammar...

15/3,K/32 (Item 6 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2004 The Dialog Corp. All rts. reserv.

01549748 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Top Telecommunications Companies to Trial Portico Service for General Magic; Extended Trials Begin in Next 30 Days

BUSINESS WIRE

May 05, 1998 20:15

JOURNAL CODE: WBWE LANGUAGE: English RECORD TYPE: FULLTEXT

WORD COUNT: 618

... will be accessible through an intelligent, natural language voice user interface (VUI) called magicTalk(tm). " **Voice - enabled** services have tremendous potential to transform telecommunications in the 21st century," said Mark Lowenstein, senior...

15/3,K/35 (Item 1 from file: 647)

DIALOG(R)File 647:CMP Computer Fulltext

(c) 2004 CMP Media, LLC. All rts. reserv.

01041844 CMP ACCESSION NUMBER: EET19950130S0030

Speech finally recognized (contents page)

GLEND A D E R M A N

ELECTRONIC ENGINEERING TIMES, 1995, n 833, PG30

PUBLICATION DATE: 950130

JOURNAL CODE: EET LANGUAGE: English

RECORD TYPE: Fulltext

SECTION HEADING: emerging markets

WORD COUNT: 985

... report generation, tracking assistance and education and training.

Kolvox Communications Inc. (Toronto) has developed a **speech - recognition** -driven interface to a sophisticated legal-data system allowing the user to access information from phone lines. Kolvox and West Publishing integrated two software programs that included West's **natural - language** search method, permitting users to perform **voice - activated** on-line **searching** and **information retrieval** from more than 5,000 databases. Users can also use **speech commands** to create legal documents with WordPerfect.

Integrated hybrid

In the same genre, Integrated Speech Solutions...

15/3,K/36 (Item 1 from file: 674)

DIALOG(R)File 674:Computer News Fulltext

(c) 2004 IDG Communications. All rts. reserv.

028056

Envisions; Supplemen

Byline: Mary Johnston-Turner; Turner is a principal with Northeast Consulting Resources, Inc. in Boston, creators of Future Mapping, an interactive process for developing long-term network and information technology visions and real-world implementation plans.

Journal: Network World Page Number: S49

Publication Date: January 11, 1993

Word Count: 943 Line Count: 68

Text:

... s protocols, flow control and user interface requirements before presenting information in an appropriate format.

Speech - activated intelligent agent software resides on most customer premises equipment. The agents **search databases**, collect and filter information, and deliver it to the user. **Natural language speech - recognition** and stylus interfaces minimize the need for keyboard literacy in this world and contribute to...

File 256:SoftBase:Reviews,Companies&Prods. 82-2004/Apr
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Set	Items	Description
S1	4995	VOICE OR SPEECH OR SPEAK??? ? OR SPOKE? ?
S2	975	S1(2N) (RECOGNIT? OR RECOGNIS? OR RECOGNIZ?)
S3	29	S1(2N) (UNDERSTAND? OR UNDERSTOOD? OR COMPREHEND? OR COMPREHENS?)
S4	507	S1(2N) (COMMAND? ? OR CONTROLL? OR CONTROL??? ? OR ACTIVAT? OR ACTUAT? OR PROMPT? OR OPERAT???? ? OR ENABL? OR INABL?)
S5	18662	SEARCH? OR QUERY? OR QUERIE? ? OR RETRIEV? OR SUBQUER? OR - ENQUIR? OR INQUIR? OR INTERROGAT? OR REQUEST? OR FETCH? OR IR
S6	7507	S5(3N) (DATA OR INFORMATION)
S7	1635	S5(3N) (DATABASE? OR DB OR KNOWLEDGEBASE? OR KNOWLEDGE()BAS-E? ? OR DATASET? OR DATABANK? OR DATAFILE? OR DATASYSTEM? OR - DATALIBRAR?)
S8	2752	S5(3N) (FILE OR FILES OR CONTENT? ? OR RECORD? ? OR REPORT? ? OR MESSAGE? ?)
S9	701	S5(3N) (MEMORY? OR ARCHIV? OR STORAGE OR DEPOSITORY? OR DEPOSITORIES OR REPOSITORY? OR REPOSITORIES OR WAREHOUSE? OR WAR-E()HOUSE? ?)
S10	432	NATURAL(W)LANGUAGE OR NLP
S11	103	S2:S4 AND S6:S9
S12	6	S11 AND S10
S13	3	S12/1999:2004
S14	3	S12 NOT S13
S15	1	RD (unique items)

15/7/1

DIALOG(R)File 256:SoftBase:Reviews,Companies&Prods.
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00111909 DOCUMENT TYPE: Review

PRODUCT NAMES: VoxML 1.0 (725765)

TITLE: Putting a 'V' Into E-Commerce

AUTHOR: Bethoney, Herb

SOURCE: PC Week, v15 n45 p36(1) Nov 9, 1998

ISSN: 0740-1604

RECORD TYPE: Review

REVIEW TYPE: Product Analysis

GRADE: Product Analysis, No Rating

Motorola's VoxML 1.0 makes it easier to **retrieve information** from the Internet because users can gain access to World Wide Web sites using a telephone and **voice commands**. However, the product is unfinished as a voice application. For instance, the version tested, which is the most recent one, does not support all VoxML specifications, including such input types as Record, Time, or Date. VoxML www.voxml.com uses the XML standard and conforms to the language rules of XML with tags that allow creation of interactive speech applications. Telephone access to the Internet via VoxML and other technologies will make electronic commerce available to more users, and permit access by those who do not have computers, those without access to the Internet from PCs, and visually impaired individuals. Any user with a telephone can surf the Net with VoxML and similar products. Other methods under consideration to broaden the e-commerce market include extensions to Hypertext Markup Language (HTML) that allow voice input. Motorola, Nuance Communications, SAP Labs, Visa International, and

BroadVision are also working together to introduce the V-Commerce development architecture. V-Commerce employs combined Java and ActiveX Speech application programming interfaces (APIs), Nuance's SpeechObjects, and VoxML to allow access to the Web via **natural language speech recognition** .

REVISION DATE: 20020930

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